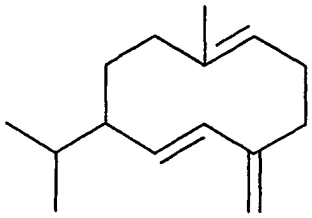
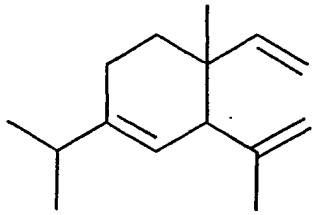
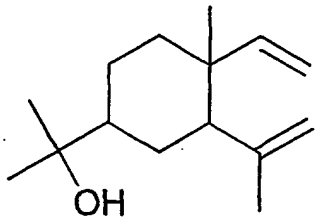


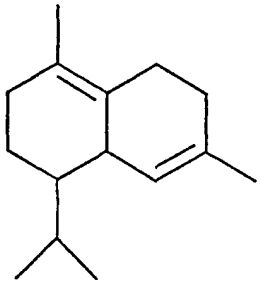
Germacrene D



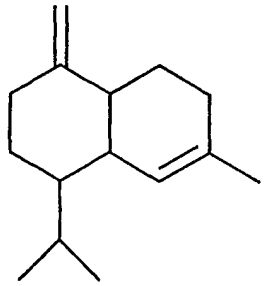
δ-elemene



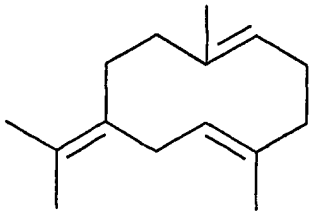
Elemol



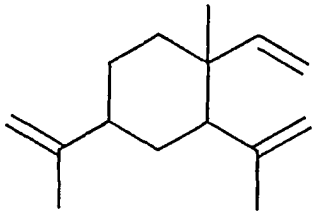
δ-cadinene



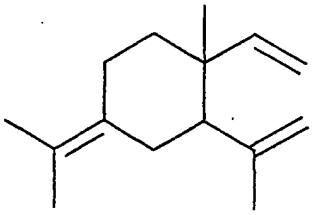
γ-cadinene



Germacrene B



β-elemene



γ-elemene

FIGURE 1

BEST AVAILABLE COPY

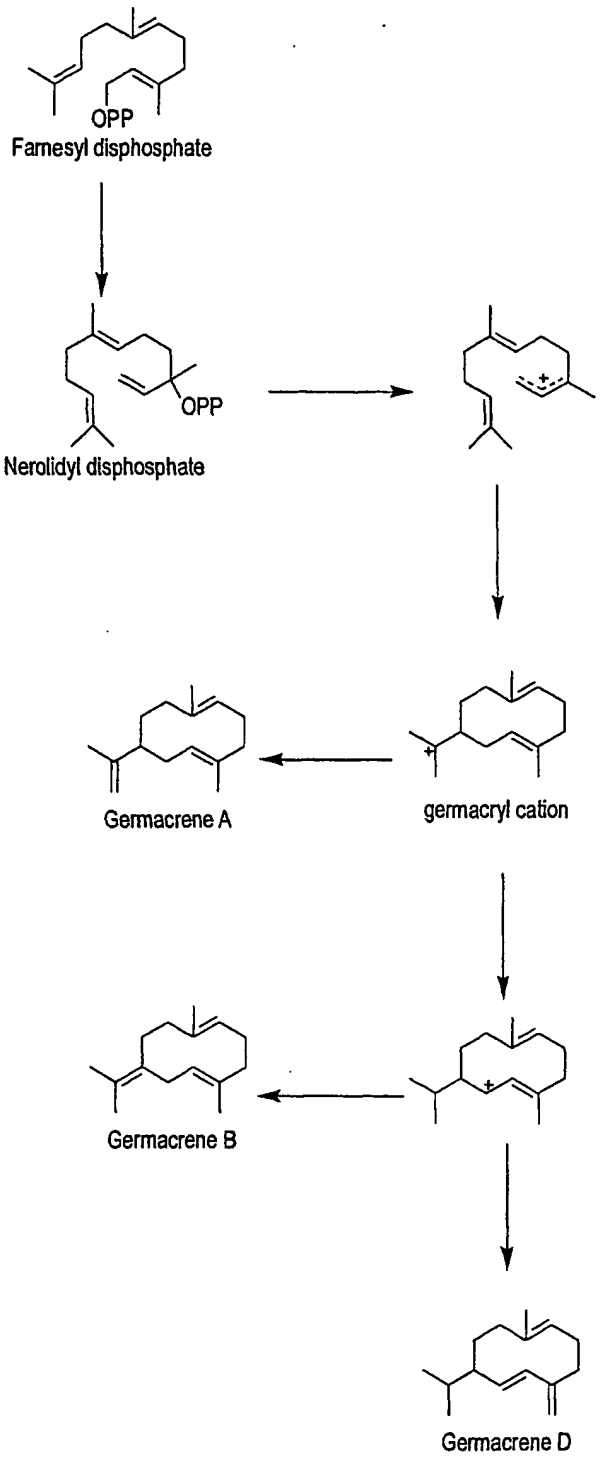

OPP
Farnesyl disphosphate
OPP
Nerolidyl disphosphate
Germacrene A
germacryl cation
Germacrene B
Germacrene D

FIGURE 2A

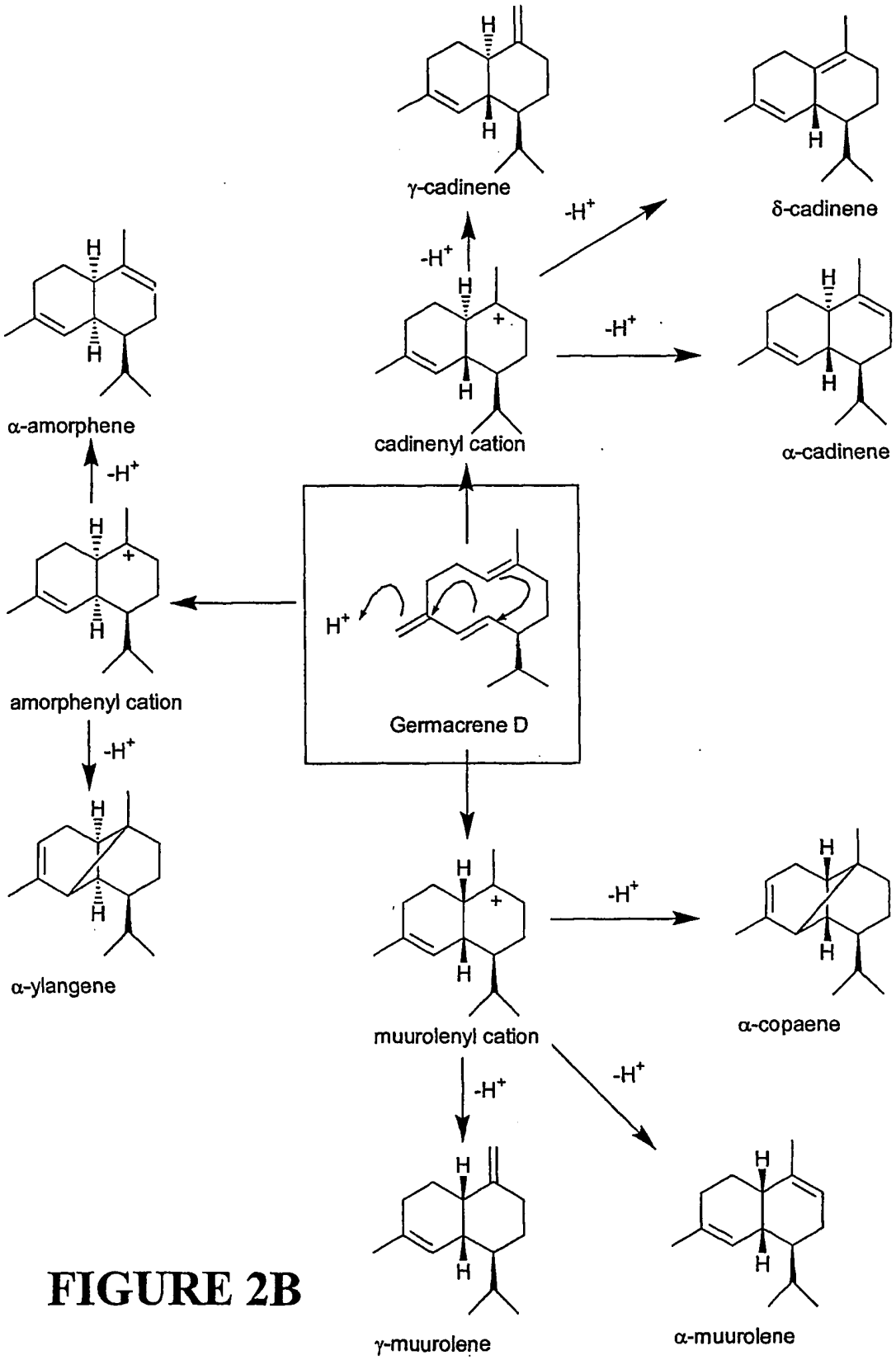

γ-cadinene
δ-cadinene
-H+
-H+
-H+
cadinenyl cation
α-cadinene
α-amorphene
-H+
amorphenyl cation
H+
Germacrene D
-H+
α-ylangene
-H+
muurolenyl cation
α-copaene
-H+
-H+
γ-muurolene
α-muurolene

FIGURE 2B

```
1     GTGAAAACTA AAATAGGCCA AGTGTGTAGG TTCATCTCTA GTTTTTCTCT TTAAATTAAT TCTTCAACCC AGAAAAAAAA CATGCAACTA CCTTGTGCTC
101   AAGCTTTGCC AATACCAACT GTTACAACCA CCACTAGTAT TGAACCACCA CATGTAACGC GTCGCTCTGC AAATTATCAT CCTAGCATTT GGGGAGATCA
201   TTTCCTCGCC TACTCTTCCG ATGCTATGGA AGAAGAGGTT ATTAACATGG AACAACAACA ACGACTTCAT CACCTGAAAC AAAAGGTGAG AAAAATGCTA
301   GAGGCAGCTG CTGAACCATC TTCACAGATG CTGAACCTCG TCGACAAAAT CCAACGCTTA GGCGTGTCTT ACCATTTTGA AACTGAGATC GAAACAGCTT
401   TACGGCACAT ATACAAAACC TGTGATTACC ATTTTGATGA TCTCCACACT GCTGCTCTCT CTTTCGGTTT ACTTAGACAA CAAGGATATC CAGTTTCTTG
501   TGATATGTTC GACAAATTCA AGAACAGCAA AGGTGAGTTT CAAGAATCCA TAATCAGCGA TGTGCAAGGA ATGTTAAGTT TGTATGAAGC TACATGTCTA
601   AGGATACACG GAGAAGATAT ACTAGACGAA GCACTAGCTT TTACCATCAC TCAACTTCGG TCCGCATTAG CCACTCCTTC AAGGACAAAA
701   TCATTCATGC TCTGAACCAG CCCATCCACA AGGGGTTGAC AAGGCTCAAC GCAAGGAGCC ACATTTTATT TTTTGAACAG AATGATTGCC ATAGCAAAGA
801   CCTTTGAAAT TTCGCAAAAT TAGATTTCAA CTTATTACAA AAGTTGCACC AGAGGAAGCT ATGTGAAATC ACAAGGTGGT GGAAAGATTT GAATTTTGCA
901   AAGACACTAC CTTTTGCCAG AGACGAATG GTAGAGTGCT ACTTTTGGAT ACTTTGGGTG TACTTTGAGC CCCAATATCT GCTTGCTAGG AGGATGCTAA
1001  CCAAGGTGAT TGCCATGATT TCCATATACG ATGACATCTA CGATGTCTAC GGTACCTTGG AAGAACTTGT TCTCTTCACT GATGCAATTG AGAGGTGGGA
1101  GATCAGTGCC TTGGATCAAC TTCCAGAGTA TATGAAACTA TGTTTATAGT CACTTTTGGA TGTTTATAGT ATGATTGATG AAGAGATGGC GAAGCAAGGA
1201  AGATCTTATT GCGTAGACTA TGCAAAATCT TCAATGAAAA TTTTGGTTAG AGCATACTTC GAAGAAGCCA AATGGTTTCA CCAAGGATAT GTTCCAACTA
1301  TGGAAGAGTA TATGCAAGTT GCATTAGTAA CCGCGGGTTA CAAAATGCTT GCAACCTCTT CCTTTGTTGG CATGGGAGAT TTGGCAACCA AAGAGGCCTT
1401  TGATTGGGTG TCAAATGATC CTTTATTGGT TCAAGCTGCA TCAGTGATAG GCAGACTCAA GGATGACATT GTTGGCGCAC AGTTTGAGCA AAAGAAGGGG
1501  CACGTGGCGT CGGCTGTCGA ATGCTACAGT AAGCAACATG GTACAACAGA GGAAGAGGCT ATTATTGAAT TGGATAAACA AGTTACACAT TCATGGAAAG
1601  ACATCAACGC AGAGTGCCTC TGCCCAATCA AGGTCCCAAT GCTCTCTTCT GCGCAGTTTC TCAATCTTGC ACGAGTGCTT TATGTTATAT ACCAGATGA
1701  AGACGGATAC ACTCATCCTG GAACCAAGGT CGAGAACTTT GTAACCTCAG TGCTTATCGA TTCTATGCCA ATCAATTAGA AAATGTAACA AGACACTGAA
1801  GTGGAGGCAT AAATAAATTC AAAAGTTGAT TTAAAGTTGG GGTAGTGAAC GGGGATTCTT ACCATTAAGA GATATTCTTG CTAAAAAGCA ATTAATTCAA
1901  TGCATTTCCA ATAAATTAAT TTAGCCAGTT GTTCTTCATC TTGTTTTTTT TTTGTTTCTC TTTCCTTTCT AAATATAAAA TTATAATTAA TTGGCAAAAA
2001  AAAAAAAAAA AAAAAAAAA
```

FIGURE 3

```
1   MQLPCAQALP IPTVTTTTSI EPPHVTRRSA NYHPSIWGDH FLAYSSDAME
51  EEVINMEQQQ RLHHLKQKVR KMLEAAAEQS SQMLNLVDKI QRLGVSYHFE
101 TEIETALRHI YKTCDYHFDD LHTAALSFRL LRQQGYPVSC DMFDKFKNSK
151 GEFQESIISD VQGMLSLYEA TCLRIHGEDI LDEALAFTIT QLRSALPNLS
201 TPFKEQIIHA LNQPIHKGLT RLNARSHILF FEQNDCHSKD LLNFAKLDFN
251 LLQKLHQREL CEITRWWKDL NFAKTLPFAR DRMVECYFWI LGVYFEPQYL
301 LARRMLTKVI AMISIIDDIY DVYGTLEELV LFTDAIERWE ISALDQLPEY
351 MKLCYQALLD VYSMIDEEMA KQGRSYCVDY AKSSMKILVR AYFEEAKWFH
401 QGYVPTMEEY MQVALVTAGY KMLATSSFVG MGDLATKEAF DWVSNDPLIV
451 QAASVIGRLK DDIVGHKFEQ KRGHVASAVE CYSKQHGTTE EEAIIELDKQ
501 VTHSWKDINA ECLCPIKVPM PLLARVLNLA RVLYVIYQDE DGYTHPGTKV
551 ENFVTSVLID SMPIN*
```

FIGURE 4

>EST72838 (*A. deliciosa* variant of multifunctional germacrene D synthase)

CTAAAATAGGCCAAGTGTGTAGGTTCATCTCTAGTTTTTCTCTTGAAAACTAAAATAGGCCAAGTG
TGTAGGTTCATCTCTAGTTTTTCTCTTGAAAACTAAAATAGGCCAAGTGTGTAGGTTCATCTCTAG
TTTTTCTCTTTAAATTAATCCTTCAACCCAGAAAAAAAACATGCAACTACCTTGTGCTCAAGCTTT
GCCAATACCAACTGTTACAACCAACACTAGTATTGAACCACCACATGTAACTCGTCGATCTGCAAA
TTATCATCCTAGCATTTGGGGAGATCATTTCCTCGCCTACTCTTCCGATGCTATGGAAGAAGAGGA
TATTAACATGGAACAACAACAACGACTTCATCACCTGAAACAAAAGGTGAGAAAAATGCTAGAGGC
AGCTGCTGAACAATCTTCACAGATGCTGAACCTCGTCGACAAAATCCAACGCTTAGGCGTGTCTTA
CCATTTTGAAACTGAGATCGAAACAGCTTTACGGCACATATACAAAACCTGTGATTACCATTTTGA
TGATCTCCACACTGCTGCTCTCTCTTTTCGGTTACTTAGACAACAAGGATATCCAGTTTCTTGTGA
TATGTTCGACAAATTCAAGAACAGCAAAGGTGAATTTCAAGAATCCATAATCAGCGATGTGCGAGG
AATGTTAAGTTTGTATGAAGCTACATGTCTAATGATACACGGAGAAGATATACTAGACGAAGCACT
AGCTTTTACCATCACTCAACTTCGGTCCGCATTGCCCAACTTAAGCACTCCTTTCAAGGAACAAAT
CATTCATGCTCTGAACCAGCCCATCCACAAGGGGTTGACAAGGCTCAATGCAAGGAGCCACATTTT
ATTTTTTGAACAGAATGATTGCCATAGCAAAGACCTTTTGAATTTCGCAAAATTAGATTTCAACTT
ATTACAAAAGTTGCACCAGAGGGAGCTATGTGAAATCACAAGGT.....
.....
.....
.....
.GAGATCAGTGCCTTGGATCAACTTCCAGAGTATATGAAACTATGTTATCAAGCACTTTTGGATGT
TTATAGTATGATTGATGAAGAGATGGCGAAGCAAGGAAGATCTTATTGCGTAGACTATGCAAAATC
TTCAATGAAAATTTTGGTTAGAGCATACTTCGAAGAAGCCAAATGGTTTCACCAAGGATATGTTCC
AACTATGGAAGAGTATATGCAAGTTGCATTAGTAACCGCGGGTTACAAAATGCTTGCAACCTCTTC
CTTTGTTGGCATGGGAGAGTTGGCAACCAAAGAGGCCTTTGATTGGGTGTCAAATGATCCTTTAAT
TGTTCAAGCTGCATCAGTGATAGGCAGACTCAAGGATGACATTGTTGGCCACAAGTTTGAGCAAAA
GAGAGGGCACGTGGCGTCGGCTGTTGAATGCTACAGTAAGCAACATGGTACAACAGAGGAAGAGGC
TATTATTGAATTGTATAAACAAGTTACACATTCATGGAAAGACATGAACGCAGAGTGCCTCTGCCC
AACCAAGGTCCCAATGCCTCTTCTTGCGCGAGTTCTCAATCTTGCACGAGTGCTTTATGTTATATA
CCAGGATGCAGATGGCTACACTCATTCTGGAACCAAGGTCAAGAACTTTGTAACCTCAGTGCTTAT
CGATTCTATGCCAATCAATTAGAAAATTTAACAAGACACTGAAGTGGAGGTATAAATAAATTCAAA
AGTTGATTTAAAGTTGGGCTAGTGAACGGGGATTCTTACCATTAAGAGATATTCTTGCTAAAAAGC
AATTAATTCAATGCATTTCCAATAAAATAATTTAGCCAGCTGTTGTTCAAAAAAAA

FIGURE 5

>EST 80968 (*A. deliciosa* variant of multifunctional germacrene D synthase)

CTAAAATAGGCCAAGTGTGTAGGTTCATCTCTAGTTTTTCTCTTGAAAACTAAAATAGGCCAAGTG
TGTAGGTTCATCTCTAGTTTTTCTCTTTAAATTAATCCTTCAACCCAGAAAAAAAACATGCAACTA
CCTTGTGCTCAAGCTTTGCCAATACCAACTGTTACAACCAACACTAGTATTGAACCACCACATGTA
ACTCGTCGATCTGCAAATTATCATCCTAGCATTTGGGGAGATCATTTCCTCGCCTACTCTTCCGAT
GCTATGGAAGAAGAGGATATTAACATGGAACAACAACAACGACTTCATCACCTGAAACAAAAGGTG
AGAAAAATGCTAGAGGCAGCTGCTAAACAATCTTCACAGATGCTGAACCTCGTCGACAAAATCCAA
CGCTTAGGCGTGTCTTACCATTTTGAAACTGAGATCGAAACAGCTTTACGGCACATATACAAAACC
TGTGATTACCATTTTGATGATCTCCACACTGCTGCTCTCTCTTTTCGGTTACTTAGACAACAAGGA
TATCCAGTTTCTTGTGACATGTTCGGCAAATTCAAGAACTGCAAAGGTGAGTTTCAAGAATCCATA
ATCAGCGATGTGCGAGGAATGTTAAGCTTGTATGAAGCTACATGTCTAAGGATACGCGGAGAAGAT
ATACTAGACGAAGCACTAGCTTTTACCACGACTCAGCTTCAGTCTGCATTGCCCAACTTAAGCACT
CCTATCAAGGAACAAATCATTCATGCTCTGAACCAGCCCATCCACAAGTGGTTGACAAGGCTCGAC
GCAAGGCGCCACATTTTATTCTTCGAACAGAATGATTGCCATGGCAAAGACCTTTTGAATTTCGCA
AAATTAGATTTCAACTCGTTACAAAAGTTGCACCAGAGGGAGCTATGTGAAATCACAAGGTGGTGG
AAAGATCTGGATTTTGCCAAGAAACTACCTTTTGCCAGAGACAGAATGGTAGAGTGCTACTTCTGG
ATACTTGGGGTGTACTTTGAGCCCCAATATTTGCGTGCTAGGAGGATGCTAACCAAGGTGATTGCC
TTGACTTCCATTATCGATGACATCTACGATGTCTACGGTACCTTGGAAGAACTTGTTCTCTTCACT
GATGCAATTGAGAGGTGGGAAATTAGTGCCTTGGATAACCTTCCAGATTATATGAAACTATGTTAT
CAAGCACTTTTGGATGTTTATAGTATGATTGATGAAGAGATGGCCAAGCAAGGAAGATCTTATTGC
GTAGACTATGCAAAATCTTCAATGAAAATTTTGGTTAGAGCATACTTCGAAGAAGCCAAATGGTTT
CACCAAGGATATGTTCCAACTATGGAAGAGTATATGCAAGTTGCATTAGTAACCGCGGGTTACAAA
ATGCTTGCAACCTCTTCCTTTGTTGGCATGGGAGAGTTGGCAACCAAAGAGGCCTTTGATTGGGTG
TCAAATGATCCTTTAATTGTTCAAGCTGCATCAGTGATAGGCAGACTCAAGGATGACATTGTTGGC
CACAAGTTTGAGCAAAAGAGAGGGCACGTGGCGTCGGCTGTCGAATGCTACAGTAAGCAACATGGT
ACAATAGAGGAAGAGGCTATTATTGAATTGGATAAACAAGTTACACATTCATGGAAAGACATCAAC
GCAGAGTGCCTCTGCCCAATCAAGGTCCCAATGCCTCTTCTTGCGCGAGTTCTCAATCTTGCACGA
GTGCTTTATGTTATATACCAGGATGAAGACGGCTACACTCATTCTGGAACCAAGGTCAAGAACTTT
GCAACCTCAGTGCTTATCGATTCTATGCCAATCAATTAGAAAATGTAACAAGACACTGAAGTGGAG
GCATAAATAAATTCAAAAGTTGGCTTAAAGTTGGGCTAAAAAAAAAAAA

>EST 304951 (*A. chinensis* variant of multifunctional germacrene D synthase)

ATCTTATTGCGTAGACTATGCAAAATCTTCAATGAAAAGTTTGGTTAGAGCATACTTCGAAGAAGC
CAAATGGTTTCACCAAGGATATGTTCCAACTATGGAAGAGTATATGCAAGTTGCAATAGTAACCGG
GGCTTACAAAATTCTTGCAACCACTTCCTTTGTTGGCATGGGAGAGTTGGCAACCAAAGAGGTCTT
TGATTGGGTGTCAAATGATCCTTTAATTGTTCAAGCTGCATCAATTGTTTCCAGACTCACGGATGA
CATTGTTGGCCACAAGTTTGAGCAAAAGAGAGGGCACGTGGCATCGGCGGTTGAATGCTACATGAA
GCAACATGGTACAACAGAGGAAGAGGCCATTGTTGAATTGTATAAGCAAGTTACAAATGCATGGAA
AGACATGAATGCAGAGTGCCTCTTCCCCACCAAGGTCCCAATGCCTCTTCTCGTGAGAGTTCTCAA
TCTTGCACGAGTGATTAATGTTCTATACAAGGATGAAGATGGCTACACTCATTCAAGAACCAAGGT
TAAGAAATTTGTGACCTCAGTGCTTGTAGATTTTGTGCCGATCAGCTAGCAAACGTTCCTCTCTAC
CACATGTTAATTAGTCTGCTTGCTAATGCAGTTTACTAATATGAAATTTAATAAATGCGTATTTTC
CAATAAAGGAATTTAAAAAAAAAAAA

>EST 82293 (*Vaccinium corymbosum* variant of multifunctional germacrene D sythase)

GGAAGCCAAATGGTTTCATGAAGGTTATGTTCCGAGTATGGAAGAGTATATGAGAGTTGCACTGGT
TACCGGTGCTTACAAAATGCTTGCAACCACTTCTTTTGTTGGCATGGGGGATTTGGTGACCAAAGA
GGCCTTTGAATGGGTGTCAAGTGATCCTTTAATTGTTGAAGCTGCATCCGTGATTTGCAGACTCAT
GGATGATATGGCAGGCCACAAGTTTGAGCAAGAGAGAGGACACGTGGCTTCGGCAGTTGAATGCTA
CATGAAACAACATGGTGCAACACAAGAAGTGGTTCTTCTTGAATTTAAAAAAAGAGTTACAAATGC
ATGGAAAGACATGAACGCAGAGTGCCTCCGCCCAACTGCCGTTCCAATGCCTCTCCTCACCCGAGT
TCTCAATCTCGCACGAGTGATCAATGTTATATACAAGGATGAAGATGGGTACACTCATTCTGGAAC
AAAGCTCAAGAACTTTGTAATCTCAGTGCTTATCGATTCTGTGCCGATCAATTAGCAAACAGTAGT
CCTAACTTAAATAATCTGTTGGCTTATAACTTTATAAGTGTCGTGAAATGTTCTAGTGAACTTGGT
AAGGATGTATTTCCGATATGTAGCTCTATCTCCACTGTACGGTTGTAATCTTGCTCTCTTCTACTA
AGAAAGCTCATTAATCGCTGCTTAAAATGTAAAGCCAACTTGCTCAAGTTTATCGTCAAACAAGTT
CTGTTTTACGATTTTTGTTGGAAAAAAAA

FIGURE 5 (continued)

>72838
MQLPCAQALPIPTVTTNTSIEPPHVTRRSANYHPSIWGDHFLAYSSDAMEEEDINMEQQQRLHHLK
QKVRKMLEAAAEQSSQMLNLVDKIQRLGVSYHFETEIETALRHIYKTCDYHFDDLHTAALSFRLLR
QQGYPVSCDMFDKFKNSKGEFQESIISDVRGMLSLYEATCLMIHGEDILDEALAFTITQLRSALPN
LSTPFKEQIIHALNQPIHKGLTRLNARSHILFFEQNDCHSKDLLNFAKLDFNLLQKLHQRELCEIT
R~~~~~~
~~~~~~~~~EISALDQLPEYMKLCYQALLDVYSMIDEEMAKQGRSYCVDYAKSSMKILVRAYFEEA
KWFHQGYVPTMEEYMQVALVTAGYKMLATSSFVGMGELATKEAFDWVSNDPLIVQAASVIGRLKDD
IVGHKFEQKRGHVASAVECYSKQHGTTEEEAIIELYKQVTHSWKDMNAECLCPTKVPMPLLARVLN
LARVLYVIYQDADGYTHSGTKVKNFVTSVLIDSMPIN

>80968
MQLPCAQALPIPTVTTNTSIEPPHVTRRSANYHPSIWGDHFLAYSSDAMEEEDINMEQQQRLHHLK
QKVRKMLEAAAKQSSQMLNLVDKIQRLGVSYHFETEIETALRHIYKTCDYHFDDLHTAALSFRLLR
QQGYPVSCDMFGKFKNCKGEFQESIISDVRGMLSLYEATCLRIRGEDILDEALAFTTTQLQSALPN
LSTPIKEQIIHALNQPIHKWLTRLDARRHILFFEQNDCHGKDLLNFAKLDFNSLQKLHQRELCEIT
RWWKDLDFAKKLPFARDRMVECYFWILGVYFEPQYLRARRMLTKVIALTSIIDDIYDVYGTLEELV
LFTDAIERWEISALDNLPDYMKLCYQALLDVYSMIDEEMAKQGRSYCVDYAKSSMKILVRAYFEEA
KWFHQGYVPTMEEYMQVALVTAGYKMLATSSFVGMGELATKEAFDWVSNDPLIVQAASVIGRLKDD
IVGHKFEQKRGHVASAVECYSKQHGTIEEEAIIELDKQVTHSWKDINAECLCPIKVPMPLLARVLN
LARVLYVIYQDEDGYTHSGTKVKNFATSVLIDSMPIN

>304951
YCVDYAKSSMKSLVRAYFEEAKWFHQGYVPTMEEYMQVAIVTGAYKILATTSFVGMGELATKEVFD
WVSNDPLIVQAASIVSRLTDDIVGHKFEQKRGHVASAVECYMKQHGTTEEEAIVELYKQVTNAWKD
MNAECLFPTKVPMPLLVRVLNLARVINVLYKDEDGYTHSRTKVKKFVTSVLVDFVPIS

>82293
EAKWFHEGYVPSMEEYMRVALVTGAYKMLATTSFVGMGDLVTKEAFEWVSSDPLIVEAASVICRLM
DDMAGHKFEQERGHVASAVECYMKQHGATQEVVLLEFKKRVTNAWKDMNAECLRPTAVPMPLLTRV
LNLARVINVIYKDEDGYTHSGTKLKNFVISVLIDSVPIN

FIGURE 6
~~~~~~~~~

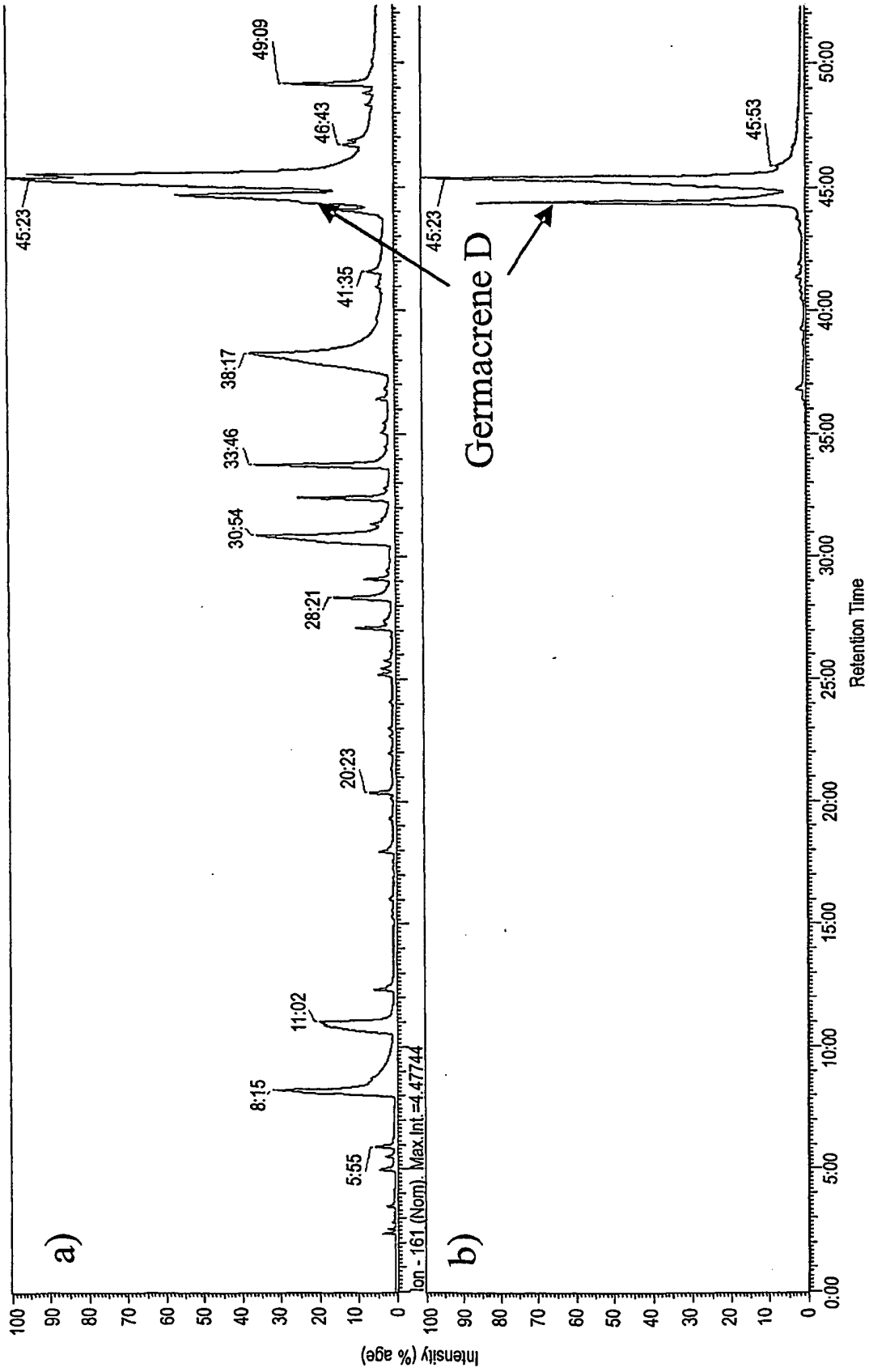

a)
b)
Ion - 161 (Nom). Max.Int.=4.47744
Intensity (% age)
Retention Time
Germacrene D
5:55
8:15
11:02
20:23
28:21
30:54
33:46
38:17
41:35
45:23
46:43
49:09
45:23
45:53
0:00
5:00
10:00
15:00
20:00
25:00
30:00
35:00
40:00
45:00
50:00

FIGURE 7

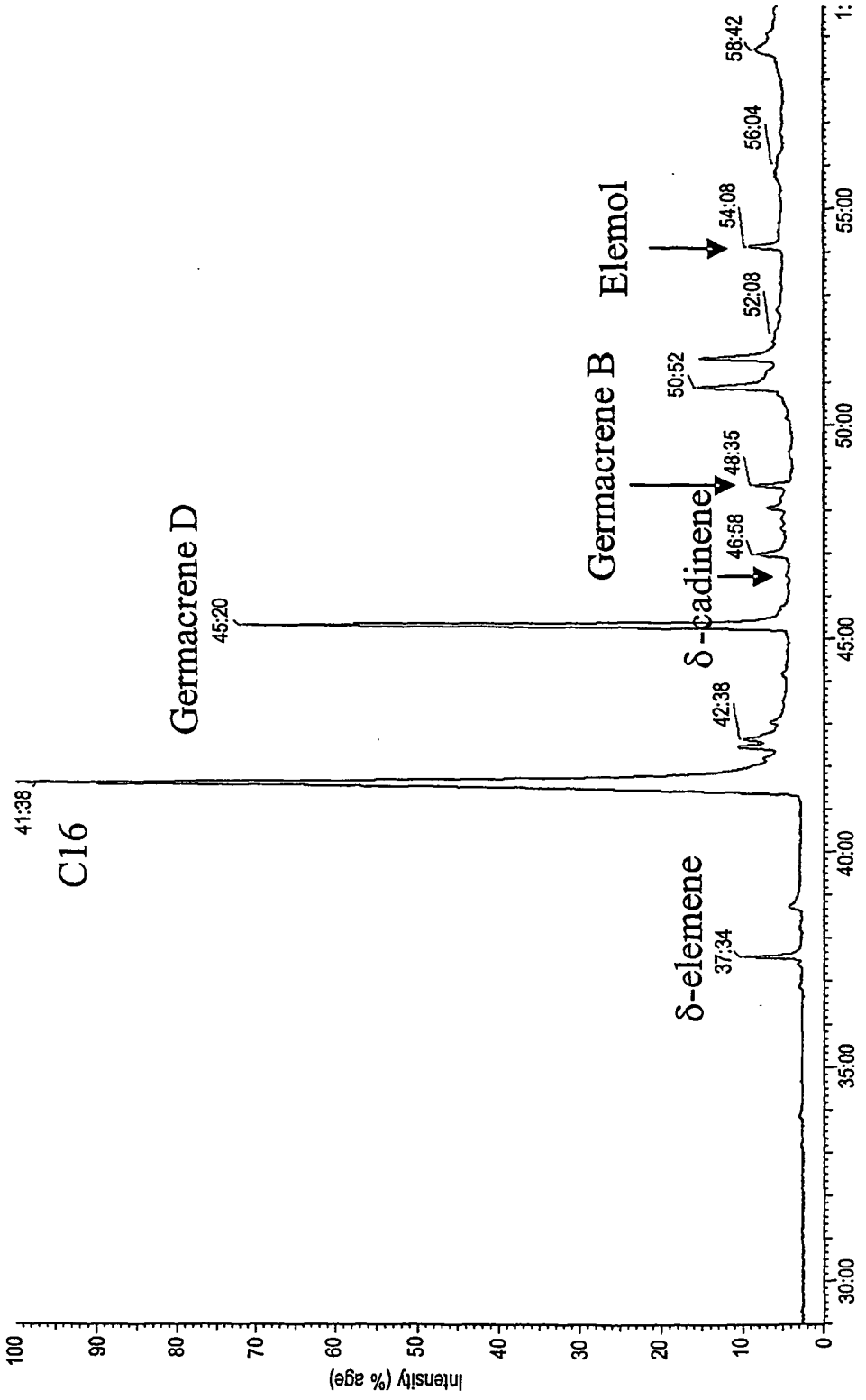

Intensity (% age)
100
90
80
70
60
50
40
30
20
10
0
30:00
35:00
40:00
45:00
50:00
55:00
Retention Time
41:38
C16
37:34
δ-elemene
42:38
45:20
Germacrene D
46:58
δ-cadinene
48:35
Germacrene B
50:52
52:08
54:08
Elemol
56:04
58:42

FIGURE 8

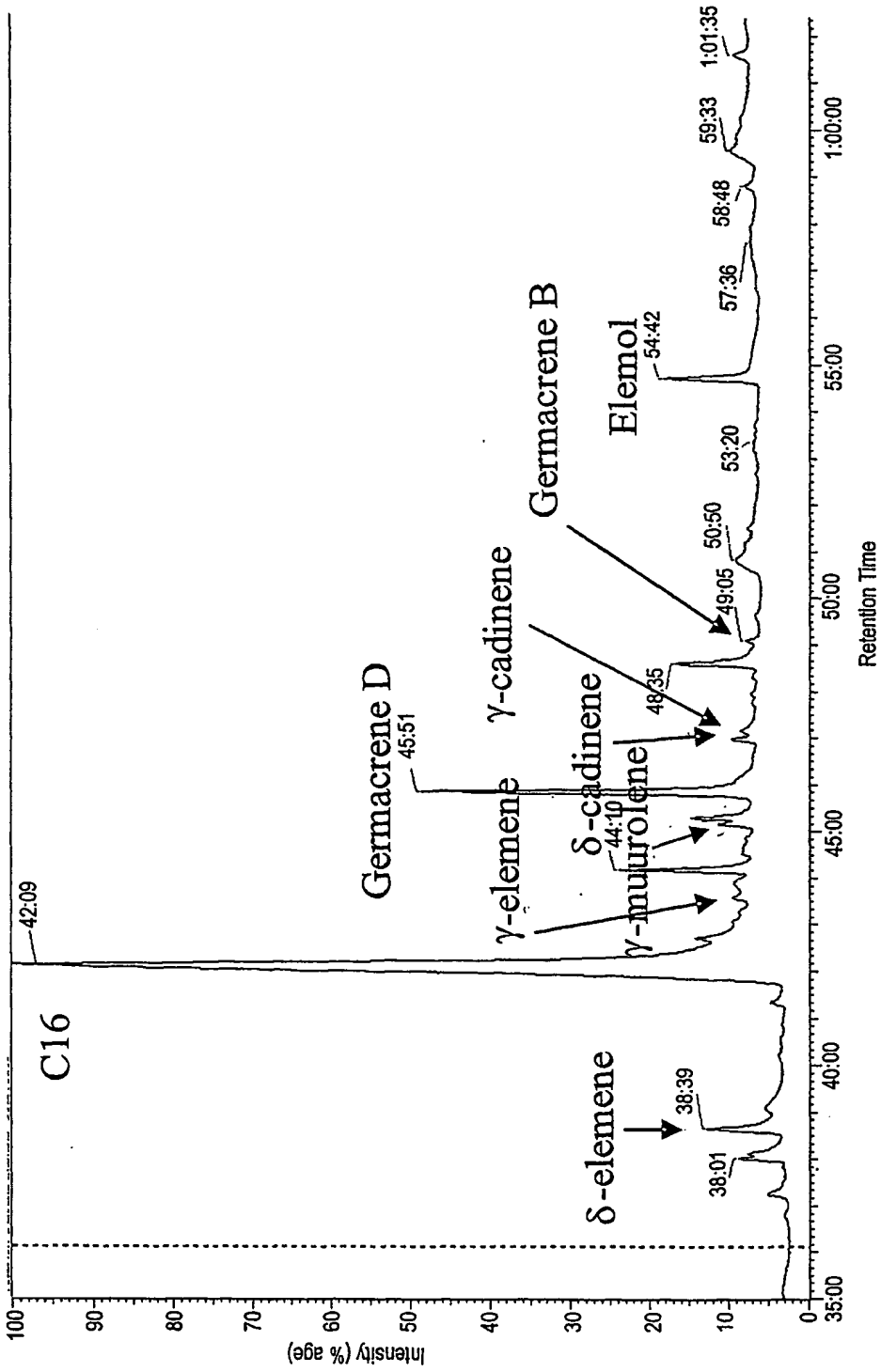

C16
42:09
δ-elemene
38:01
38:39
γ-elemene
Germacrene D
45:51
γ-cadinene
δ-cadinene
44:10
γ-muurolene
48:35
Germacrene B
49:05
Elemol
54:42
50:50
53:20
57:36
58:48
59:33
1:01:35
Intensity (% age)
Retention Time
35:00
40:00
45:00
50:00
55:00
1:00:00
0
10
20
30
40
50
60
70
80
90
100

FIGURE 9

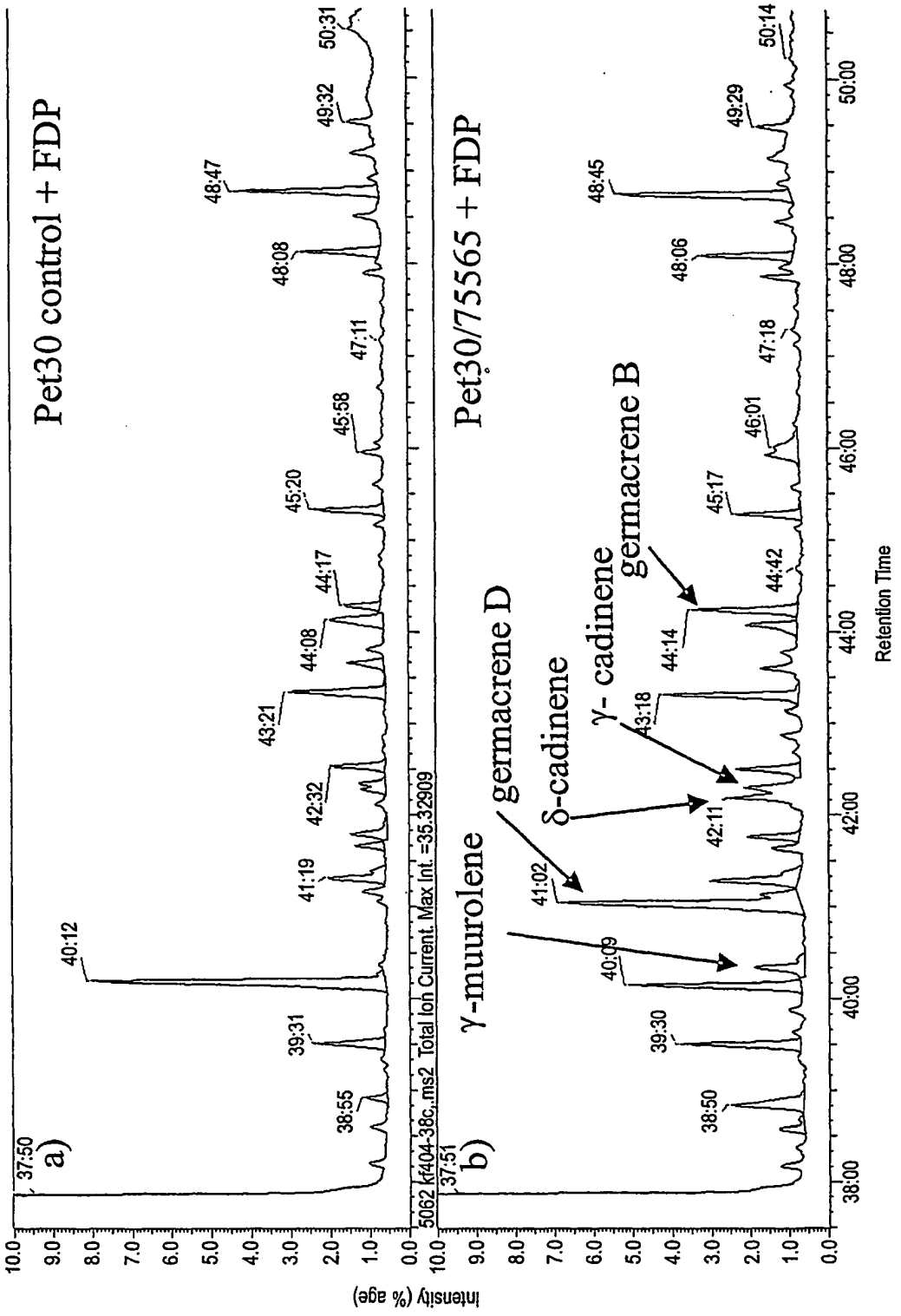

Pet30 control + FDP
a)
37:50
38:55
39:31
40:12
41:19
42:32
43:21
44:08
44:17
45:20
45:58
47:11
48:08
48:47
49:32
50:31
Pet30/75565 + FDP
b)
37:51
38:50
39:30
40:09
41:02
42:11
43:18
44:14
44:42
45:17
46:01
47:18
48:06
48:45
49:29
50:14
γ-muurolene
germacrene D
δ-cadinene
γ- cadinene
germacrene B
5062 kf404-38c..ms2 Total Ion Current. Max Int. =35.32909
Intensity (% age)
Retention Time
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
38:00
40:00
42:00
44:00
46:00
48:00
50:00

FIGURE 10

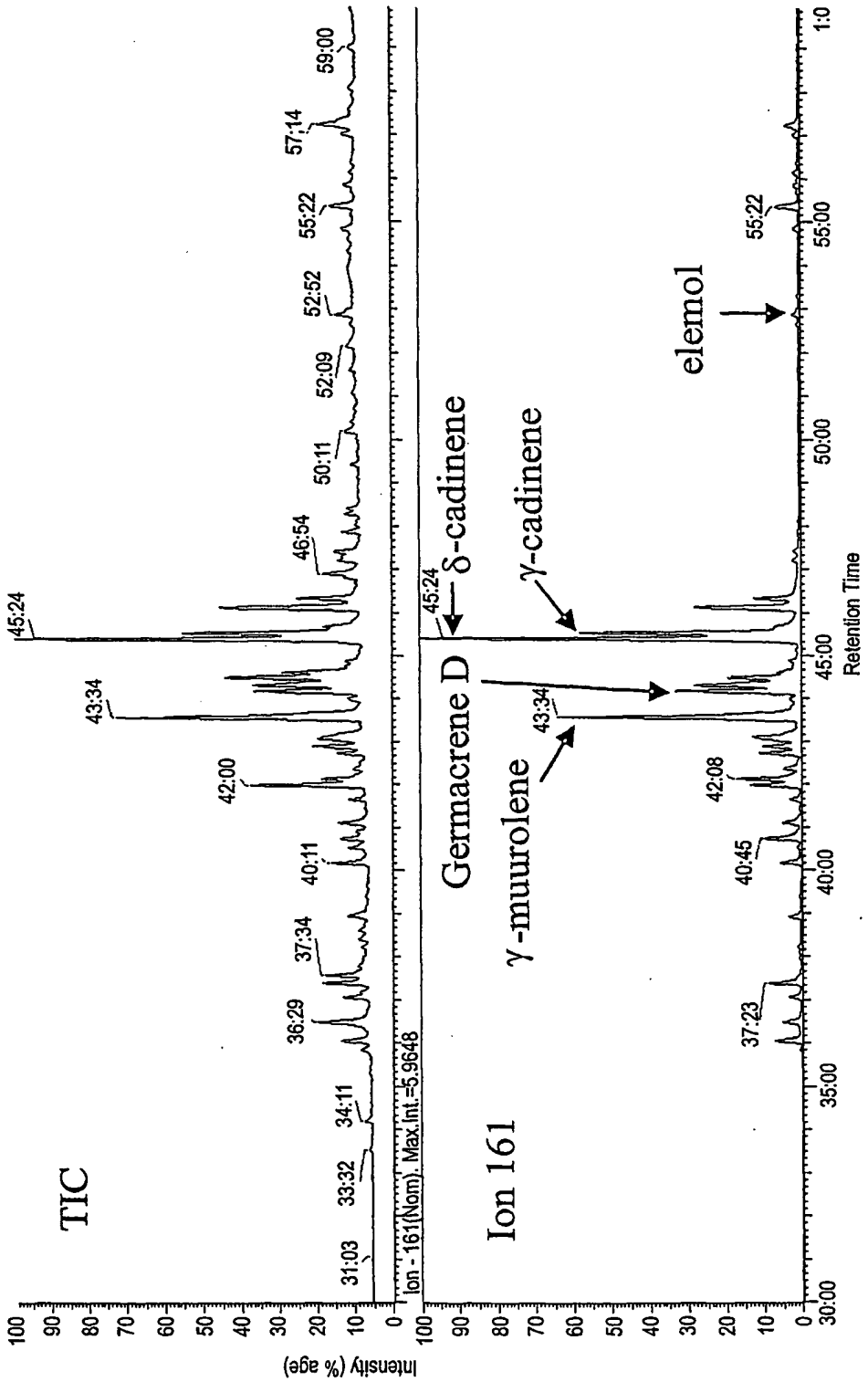

TIC
Ion 161
Ion - 161(Nom). Max.Int.=5.9648
Intensity (% age)
Retention Time
Germacrene D
γ-muurolene
δ-cadinene
γ-cadinene
elemol
31:03
33:32
34:11
36:29
37:34
40:11
42:00
43:34
45:24
46:54
50:11
52:09
52:52
55:22
57:14
59:00
37:23
40:45
42:08
43:34
45:24
55:22
30:00
35:00
40:00
45:00
50:00
55:00
1:0

FIGURE 11

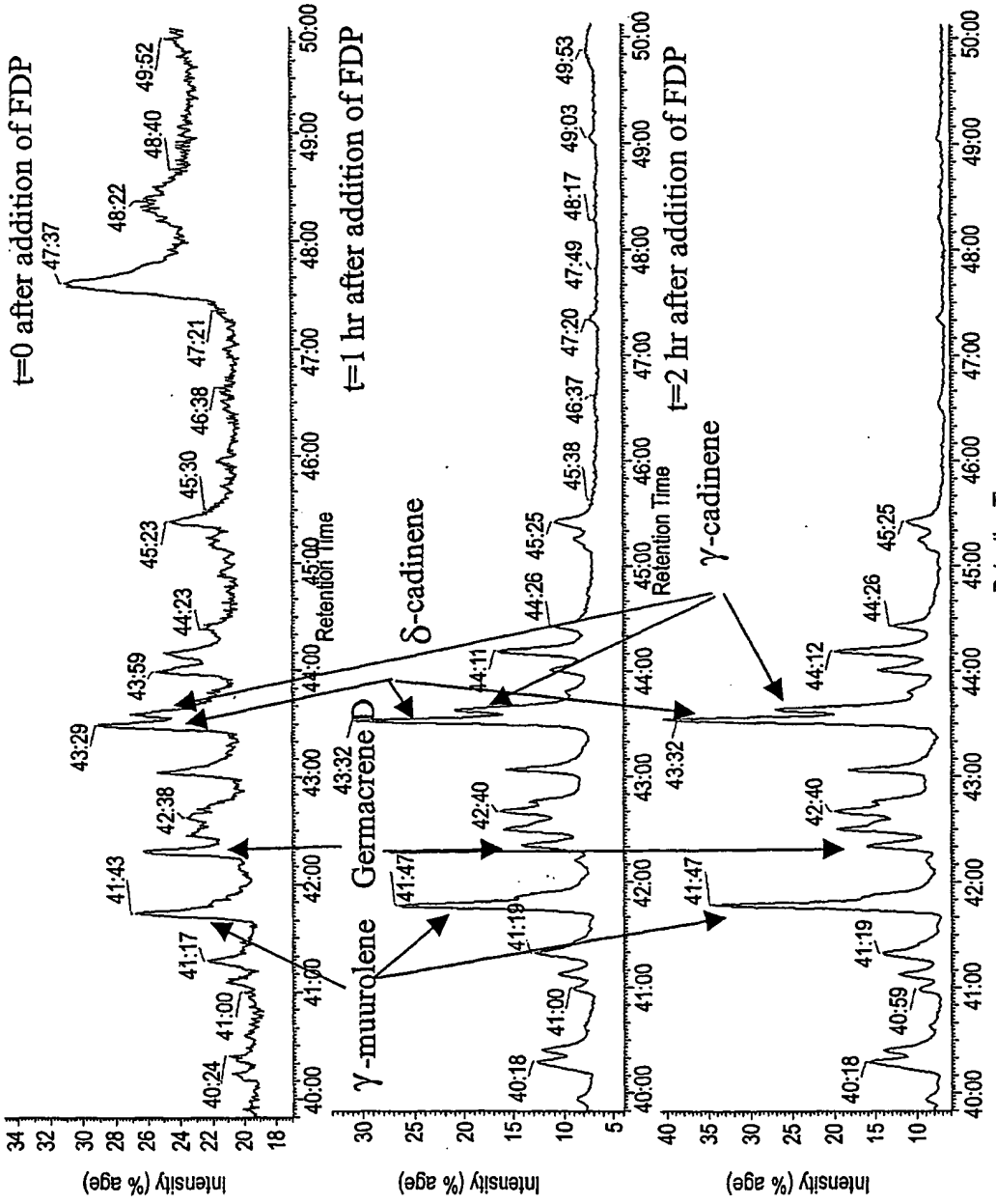

t=0 after addition of FDP
t=1 hr after addition of FDP
t=2 hr after addition of FDP
γ-muurolene
Germacrene D
δ-cadinene
γ-cadinene
Intensity (% age)
Retention Time

FIGURE 12

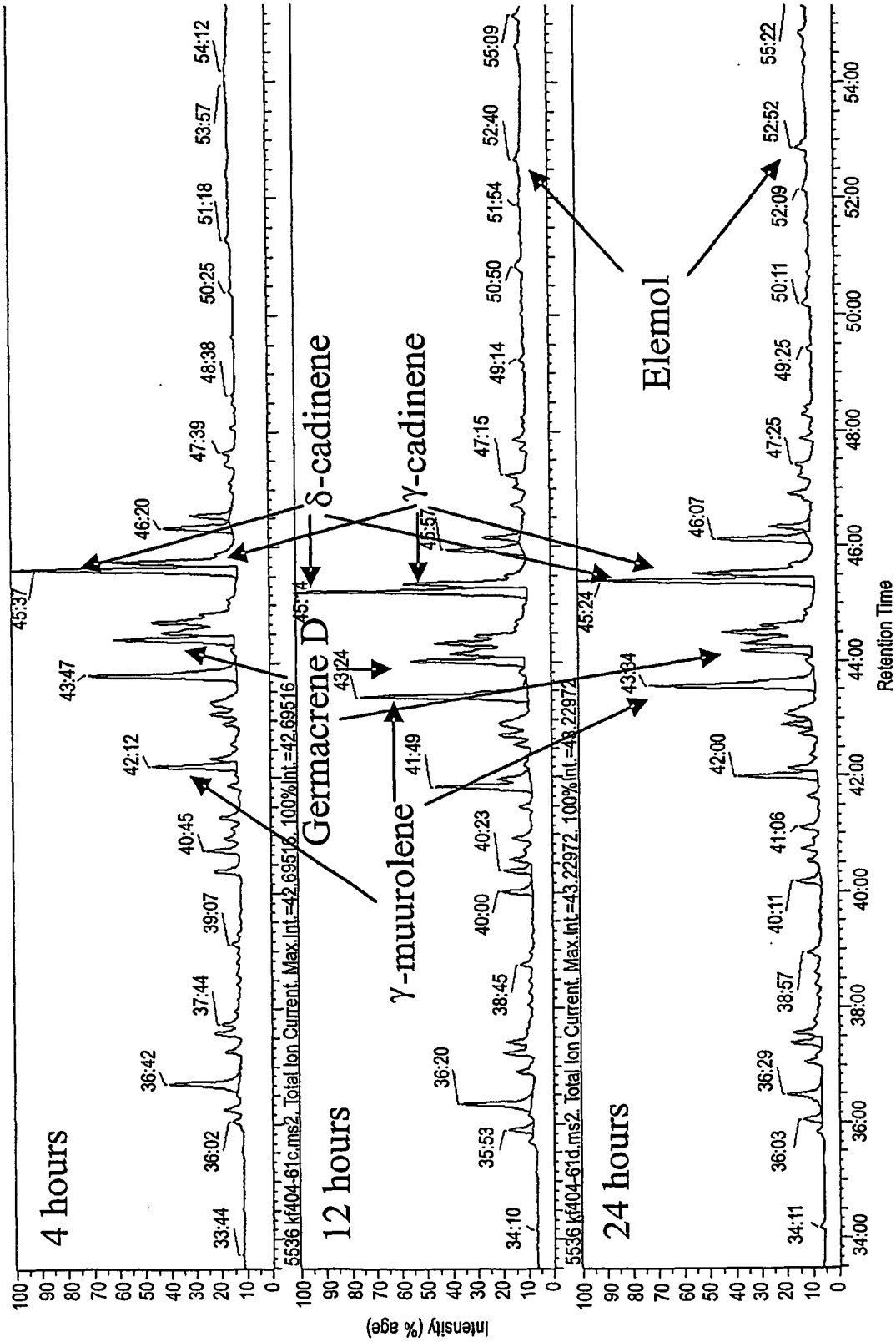

4 hours
12 hours
24 hours
δ-cadinene
γ-cadinene
Germacrene D
γ-muurolene
Elemol
Intensity (% age)
Retention Time

FIGURE 13

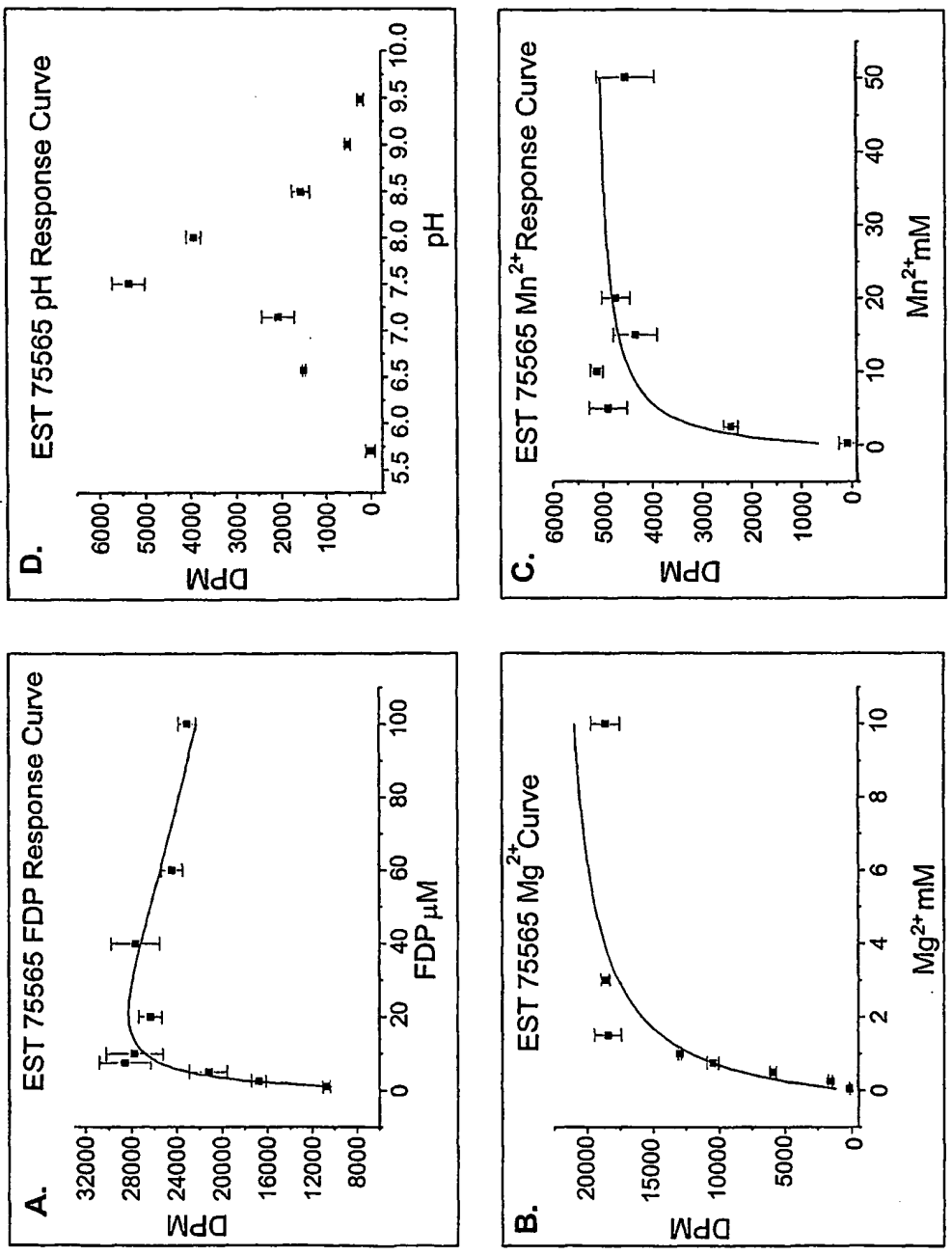

A.
EST 75565 FDP Response Curve
DPM
FDP µM
B.
EST 75565 Mg2+ Curve
DPM
Mg2+ mM
C.
EST 75565 Mn2+ Response Curve
DPM
Mn2+ mM
D.
EST 75565 pH Response Curve
DPM
pH

FIGURE 14

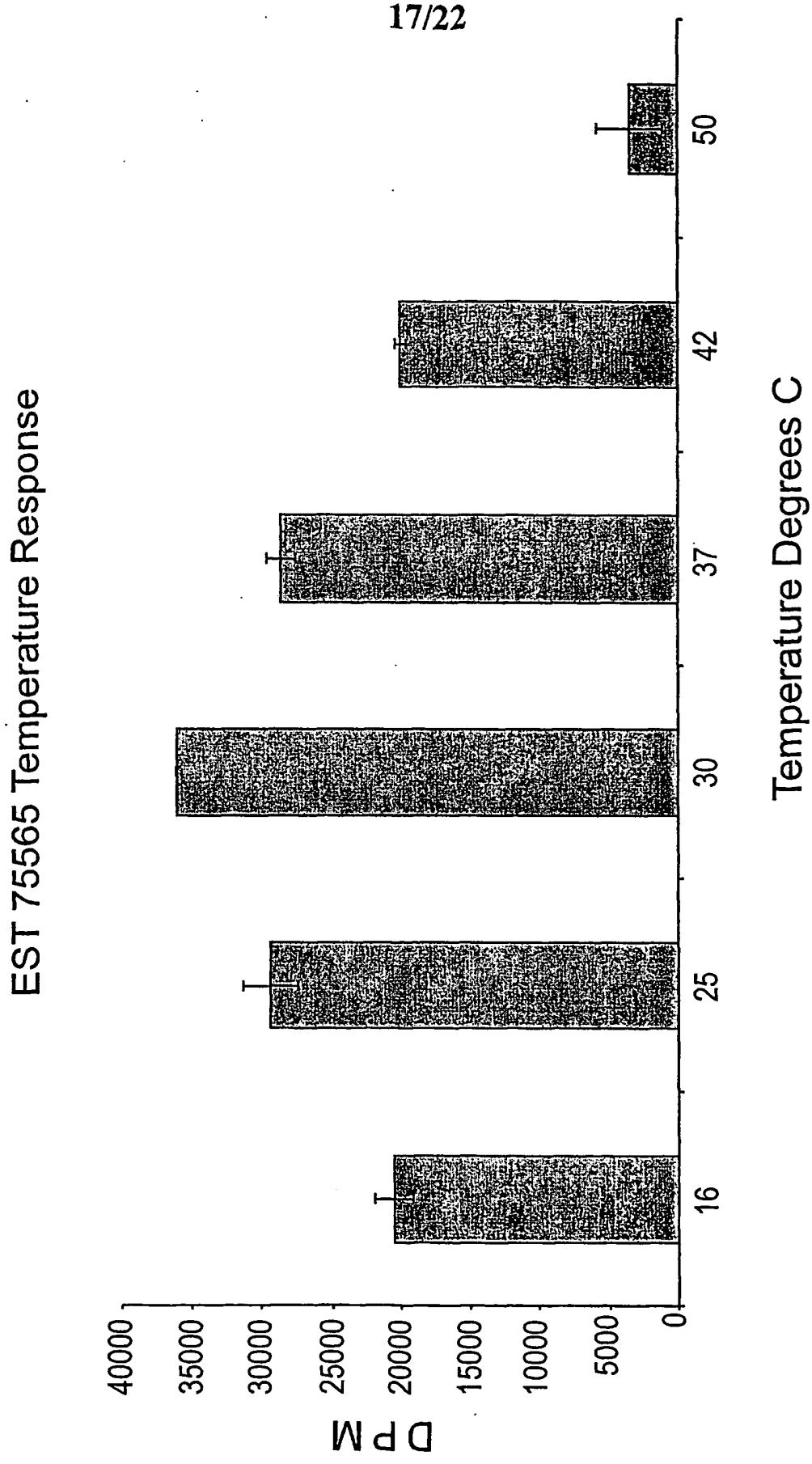

EST 75565 Temperature Response
DPM
40000
35000
30000
25000
20000
15000
10000
5000
0
16
25
30
37
42
50
Temperature Degrees C

FIGURE 15

10/540759
Rec'd PCT/PTO 24 JUN 2005
PCT/NZ2003/000294

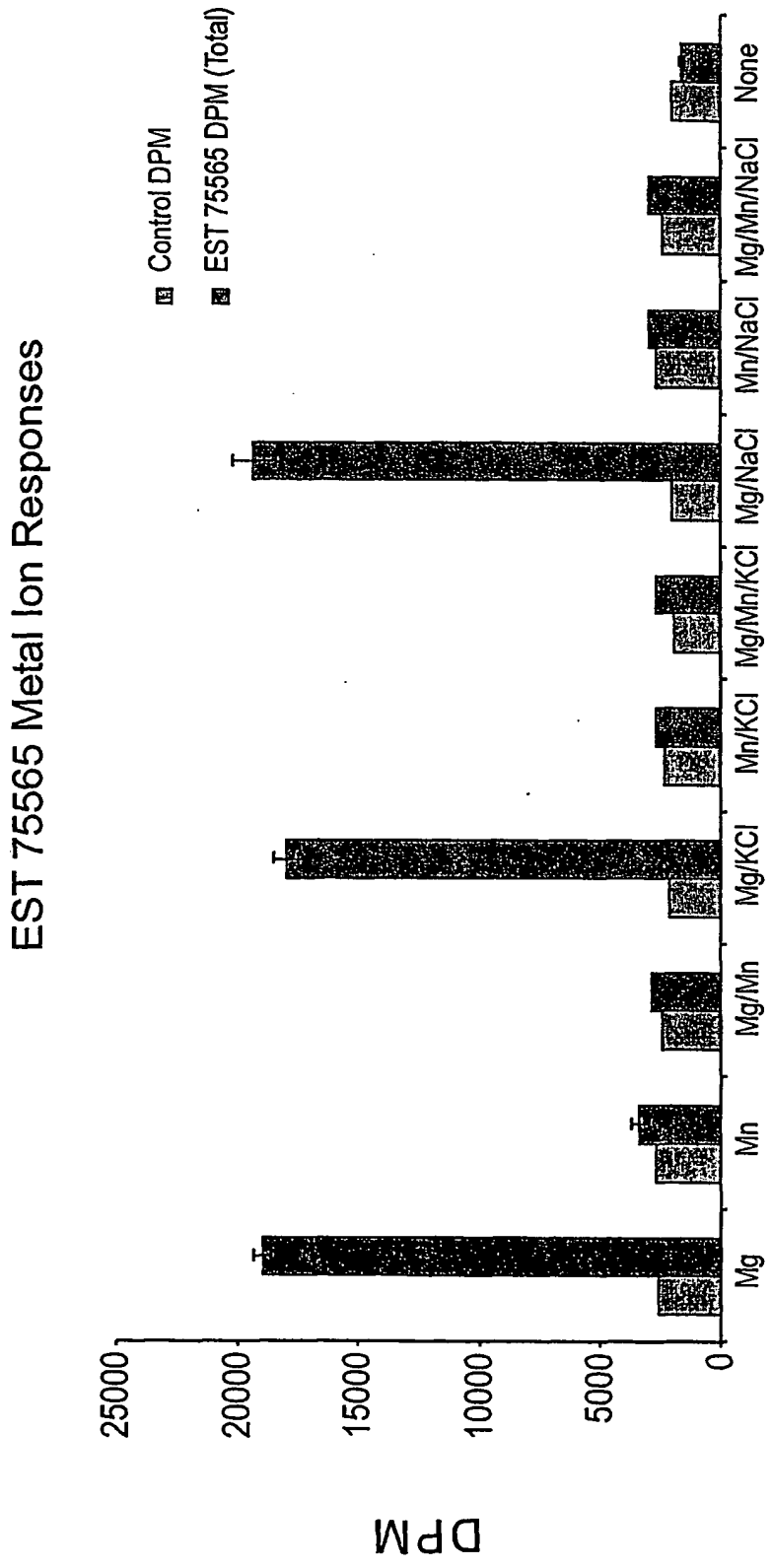


FIGURE 16

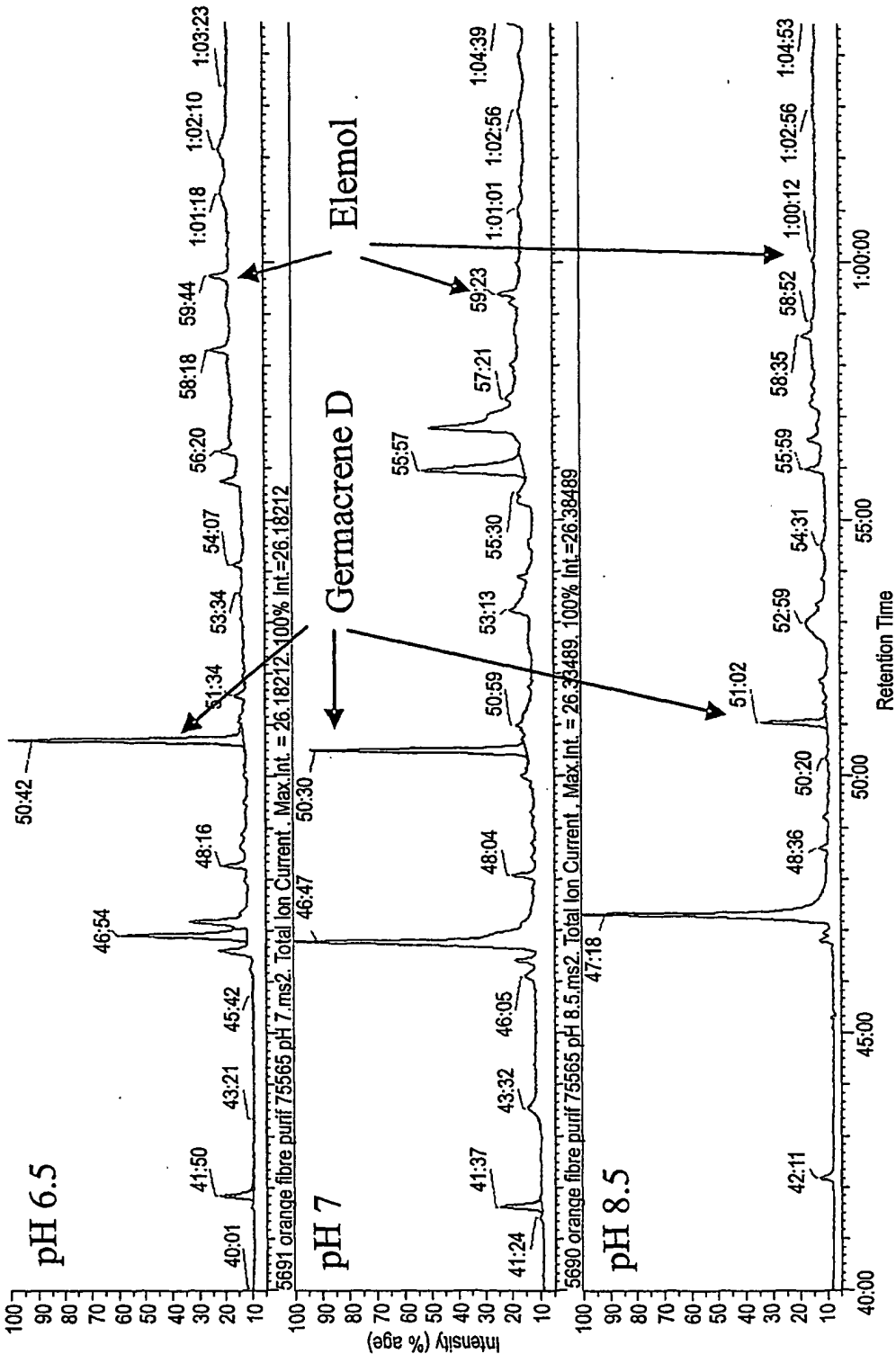

pH 6.5
pH 7
pH 8.5
Germacrene D
Elemol
5691 orange fibre purif 75565 pH 7.ms2. Total Ion Current. Max.Int. = 26.18212. 100% Int.=26.18212
5690 orange fibre purif 75565 pH 8.5.ms2. Total Ion Current. Max.Int. = 26.38489. 100% Int.=26.38489
Intensity (% age)
Retention Time

FIGURE 17

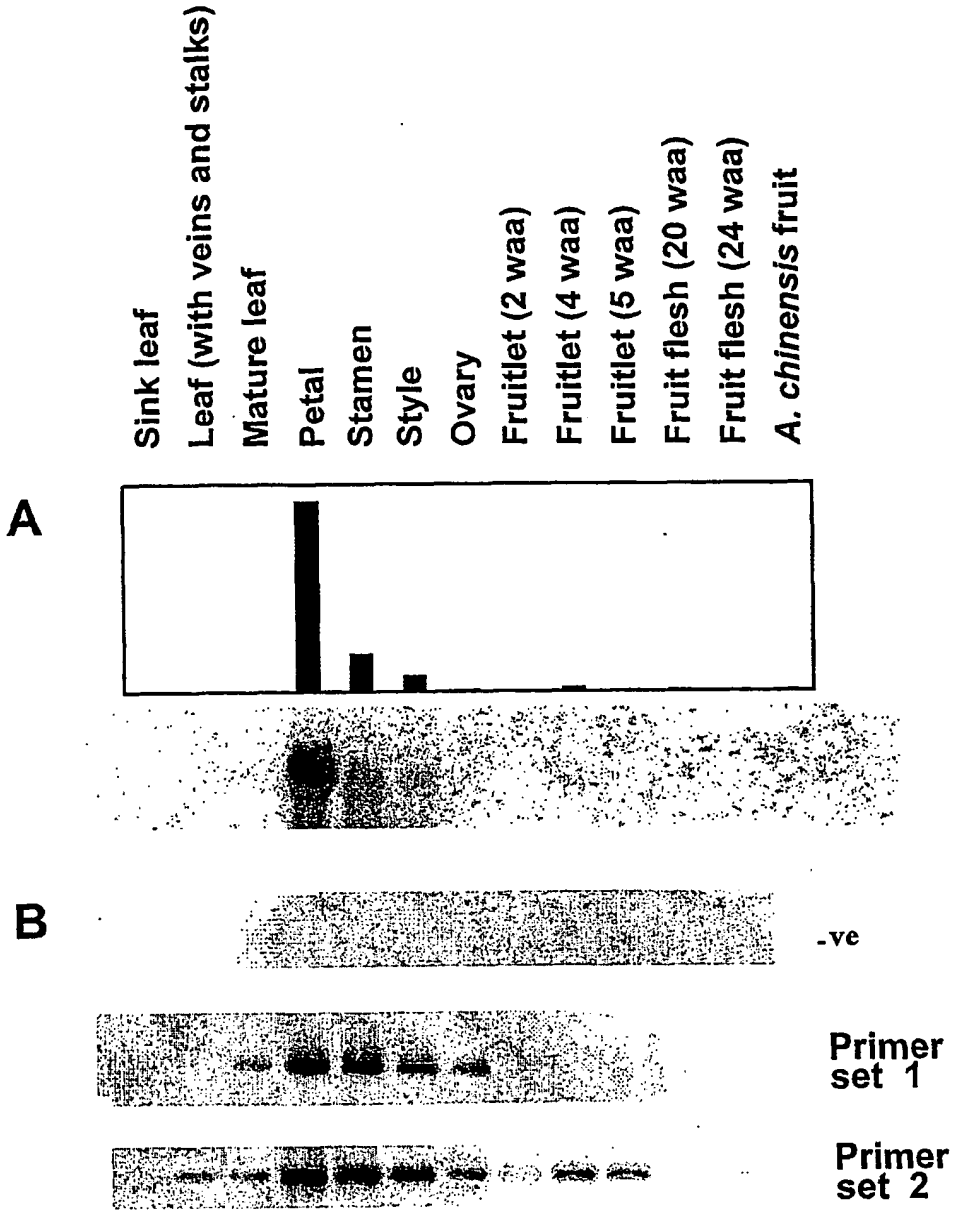

Sink leaf
Leaf (with veins and stalks)
Mature leaf
Petal
Stamen
Style
Ovary
Fruitlet (2 waa)
Fruitlet (4 waa)
Fruitlet (5 waa)
Fruit flesh (20 waa)
Fruit flesh (24 waa)
A. chinensis fruit
A
B
-ve
Primer set 1
Primer set 2

FIGURE 18

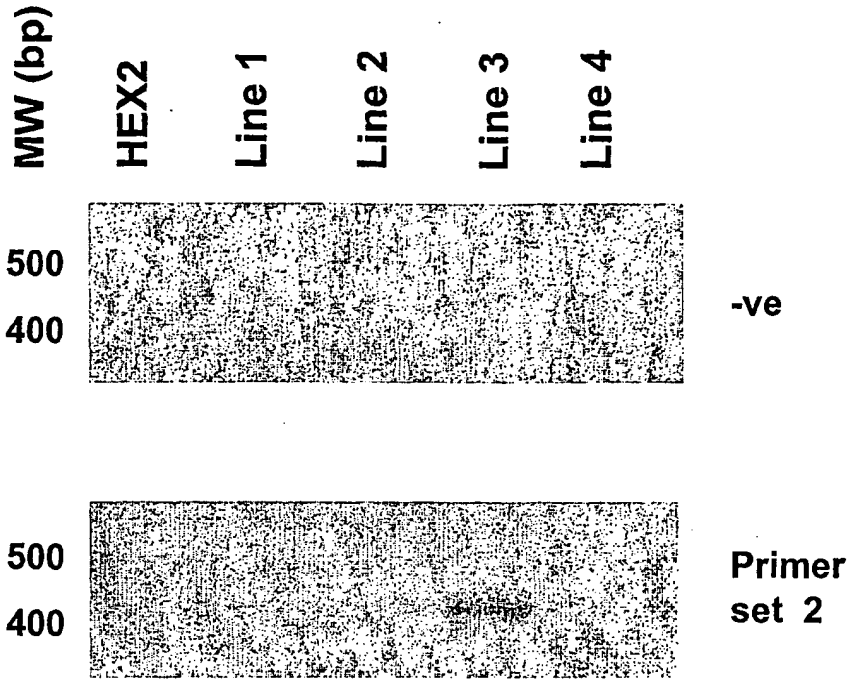

MW (bp)
HEX2
Line 1
Line 2
Line 3
Line 4
500
400
-ve
500
400
Primer
set 2

FIGURE 19

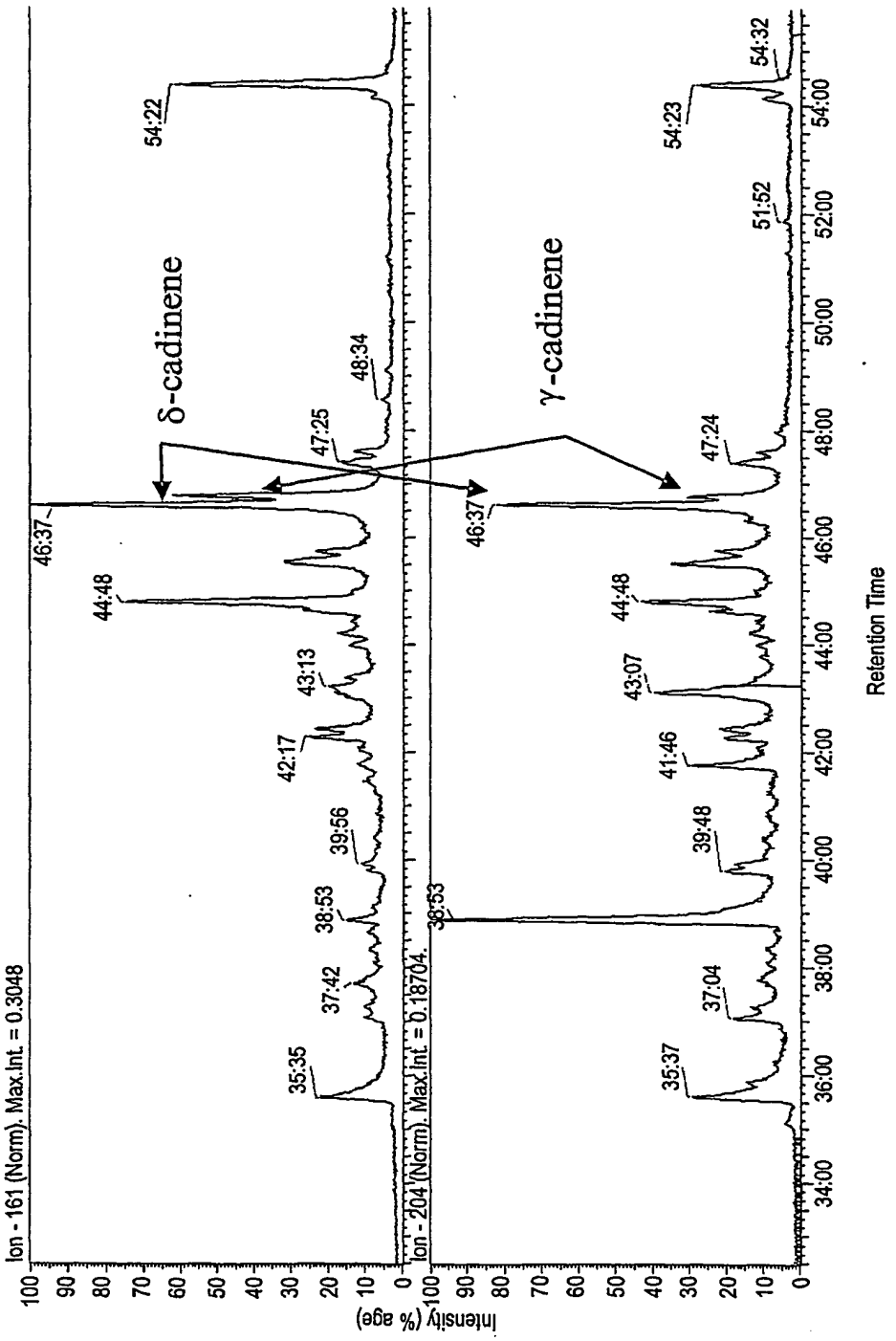

δ-cadinene
γ-cadinene
Ion - 161 (Norm). Max.Int. = 0.3048
Ion - 204 (Norm). Max.Int. = 0.18704.
Intensity (% age)
Retention Time
46:37
44:48
43:13
42:17
39:56
38:53
37:42
35:35
54:22
48:34
47:25
46:37
44:48
43:07
41:46
39:48
38:53
37:04
35:37
54:23
54:32
51:52
47:24

FIGURE 20

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